

In the Claims:

1. (Currently Amended) A method of impregnating an intraluminal prosthesis with a pharmacological agent, comprising:
masking one or more portions of an intraluminal prosthesis with a protective layer of material, wherein the intraluminal prosthesis comprises polymeric material;
immersing ~~the an~~ intraluminal prosthesis ~~comprising polymeric material~~ in a mixture of a carrier fluid and a pharmacological agent;
pressurizing the mixture of carrier fluid and pharmacological agent for a time sufficient to cause the carrier fluid and pharmacological agent to at least partially penetrate only unmasked portions of the polymeric material; and
removing the pressure such that the carrier fluid diffuses out of the polymeric material and such that an amount of the pharmacological agent remains elutably trapped within the unmasked portions of the polymeric material.
2. (Previously Presented) The method of Claim 1, wherein the carrier fluid is carbon dioxide.
3. (Original) The method of Claim 2, wherein the pharmacological agent comprises everolimus.
4. (Withdrawn) The method of Claim 1, wherein the carrier fluid is water.
5. (Withdrawn) The method of Claim 4, wherein pressurizing the mixture of carrier fluid and pharmacological agent comprises subjecting the mixture of carrier fluid and pharmacological agent to pressurized carbon dioxide.
6. (Original) The method of Claim 2, wherein the carbon dioxide is present in a supercritical state.

7. (Original) The method of Claim 6, wherein the carbon dioxide contains one or more of a co-solvent, a surfactant, and a co-surfactant.

8. (Original) The method of Claim 1, wherein the carrier fluid is configured to alter diffusion coefficients of the polymeric material.

9. (Original) The method of Claim 8, wherein the co-solvent is selected from the group consisting of ethanol and methanol.

10. (Original) The method of Claim 1, wherein the intraluminal prosthesis is a stent.

11. (Withdrawn) The method of Claim 1, wherein the polymeric material is erodible.

12. (Original) The method of Claim 1, wherein the polymeric material is non-erodible.

13. (Original) The method of Claim 1, wherein the polymeric material is a coating on a portion of the intraluminal prosthesis.

14. (Withdrawn) The method of Claim 11, wherein the erodible polymeric material is selected from the group consisting of, surgical gut, silk, cotton, liposomes, poly(hydroxybutyrate), polycarbonate, polyacrylate, polyanhydride, polyethylene glycol, poly(ortho esters), poly(phosphoesters), polyesters, polyamides, polyphosphazenes, poly(*p*-dioxane), poly(amino acid), polyglactin, erodible hydrogels, collagen, chitosan, poly(lactic acid), poly(L-lactic acid), poly(D,L-lactic acid), poly(glycolic acid), poly(D-lactic-co-glycolic acid), poly(L-lactic-co-glycolic acid), poly(D,L-lactic-co-glycolic acid), poly(ε-caprolactone), poly(valerolactone), poly(hydroxy butyrate), poly(hydrovalerate), polydioxanone, poly(propylene fumarate), poly(ethyleneoxide)-poly(butylene tetraphthalate), poly(lactic acid-co-lysine), poly(L-lactic acid) and poly(ε-caprolactone) copolymers.

15. (Original) The method of Claim 1, wherein the step of removing pressure is carried out under controlled conditions.

16. (Original) The method of Claim 15, wherein the step of removing pressure is carried out under controlled conditions in which at least one parameter selected from the group consisting of temperature, rate of temperature change, pressure, rate of pressure change, carrier fluid quantity, and rate of carrier fluid quantity, is controlled in a predetermined pattern.

17. (Previously Presented) The method of Claim 1, further comprising:
immersing the intraluminal prosthesis in a mixture of a carrier fluid and radiopaque material; and

pressurizing the mixture of carrier fluid and radiopaque material for a time sufficient to cause the carrier fluid and radiopaque material to at least partially penetrate the polymeric material.

18. (Withdrawn) A method of impregnating an intraluminal prosthesis with a pharmacological agent, comprising:

immersing an intraluminal stent comprising erodible polymeric material in a mixture of carbon dioxide and pharmacological agent, wherein the erodible polymeric material is selected from the group consisting of, surgical gut, silk, cotton, liposomes, poly(hydroxybutyrate), polycarbonate, polyacrylate, polyanhydride, polyethylene glycol, poly(ortho esters), poly(phosphoesters), polyesters, polyamides, polyphosphazenes, poly(*p*-dioxane), poly(amino acid), polyglactin, erodible hydrogels, collagen, chitosan, poly(lactic acid), poly(L-lactic acid), poly(D,L-lactic acid), poly(glycolic acid), poly(D-lactic-co-glycolic acid), poly(L-lactic-co-glycolic acid), poly(D,L-lactic-co-glycolic acid), poly(ε-caprolactone), poly(valerolactone), poly(hydroxy butyrate), poly(hydrovalerate), polydioxanone, poly(propylene fumarate), poly(ethyleneoxide)-poly(butylene tetraphthalate), poly(lactic acid-co-lysine), poly(L-lactic acid) and poly(ε-caprolactone) copolymers;

pressurizing the mixture of carbon dioxide and pharmacological agent for a time sufficient to cause the carbon dioxide and pharmacological agent to at least partially penetrate the polymeric material; and

removing the pressure such that the carbon dioxide diffuses out of the polymeric material and such that an amount of the pharmacological agent remains elutably trapped within the polymeric material.

19. (Withdrawn) The method of Claim 18, wherein the pharmacological agent is everolimus.

20. (Withdrawn) The method of Claim 18, wherein the polymeric material is a coating on a portion of the intraluminal prosthesis.

21. (Withdrawn) The method of Claim 18, wherein the carbon dioxide is present in a supercritical state.

22. (Withdrawn) The method of Claim 18, wherein the carbon dioxide is configured to alter diffusion coefficients of the polymeric material.

23. (Withdrawn) The method of Claim 18, wherein the intraluminal prosthesis is a stent.

24. (Withdrawn) A method of impregnating an intraluminal prosthesis with a pharmacological agent, comprising:

immersing an intraluminal prosthesis comprising erodible polymeric material in a mixture of water and a pharmacological agent, wherein the erodible polymeric material is selected from the group consisting of, surgical gut, silk, cotton, liposomes, poly(hydroxybutyrate), polycarbonate, polyacrylate, polyanhydride, polyethylene glycol, poly(ortho esters), poly(phosphoesters), polyesters, polyamides, polyphosphazenes, poly(*p*-dioxane), poly(amino acid), polyglactin, erodible hydrogels, collagen, chitosan, poly(lactic acid), poly(L-lactic acid), poly(D,L-lactic acid), poly(glycolic acid), poly(D-lactic-co-

glycolic acid), poly(L-lactic-co-glycolic acid), poly (D,L-lactic-co-glycolic acid), poly(ε-caprolactone), poly(valerolactone), poly(hydroxy butyrate), poly(hydrovalerate), polydioxanone, poly(propylene fumarate), poly(ethyleneoxide)-poly(butylene tetraphthalate), poly(lactic acid-co-lysine), poly(L-lactic acid) and poly(ε-caprolactone) copolymers;

pressurizing the mixture of water and pharmacological agent with carbon dioxide for a time such that the water and pharmacological agent at least partially penetrate the polymeric material; and

removing the pressure such that the water diffuses out of the polymeric material and such that an amount of the pharmacological agent remains elutably trapped within the polymeric material.

25. (Withdrawn) The method of Claim 24, wherein the polymeric material is a coating on a portion of the intraluminal stent.

26. (Withdrawn) The method of Claim 24, wherein the carbon dioxide is present in a supercritical state.

27. (Withdrawn) The method of Claim 26, wherein the carbon dioxide contains one or more of a co-solvent, a surfactant, and a co-surfactant.

28. (Withdrawn) The method of Claim 27, wherein the co-solvent is selected from the group consisting of ethanol and methanol.

29. (Withdrawn) The method of Claim 24, wherein the intraluminal prosthesis is a stent.

30. (Withdrawn) The method of Claim 24, further comprising:
immersing the intraluminal prosthesis in a mixture of a carbon dioxide and radiopaque material; and

pressurizing the mixture of carbon dioxide and radiopaque material for a time such that the carbon dioxide and radiopaque material at least partially penetrate the polymeric material.

31. (Currently Amended) A method of impregnating an intraluminal prosthesis with a pharmacological agent, comprising:

masking one or more portions of an intraluminal prosthesis with a protective layer of material, wherein the intraluminal prosthesis comprises polymeric material;

~~placing the an intraluminal prosthesis within a pressure vessel, wherein a portion of the intraluminal prosthesis comprises polymeric material;~~

pressurizing the interior of the pressure vessel to a predetermined pressure;

supplying a mixture of a carrier fluid and a pharmacological agent into the pressure vessel;

exposing the polymeric material and the mixture of carrier fluid and pharmacological agent in the pressure vessel for a time such that the carrier fluid and pharmacological agent at least partially penetrate only unmasked portions of the polymeric material; and

releasing the pressure in the pressure vessel such that the carrier fluid diffuses out of the polymeric material and such that an amount of the pharmacological agent remains elutably trapped within unmasked portions of the polymeric material.

32. (Previously Presented) The method of Claim 31, wherein the carrier fluid is carbon dioxide.

33. (Original) The method of Claim 32, wherein the pharmacological agent is everolimus.

34. (Withdrawn) The method of Claim 31, wherein the carrier fluid is water.

35. (Original) The method of Claim 31, wherein pressurizing the interior of the pressure vessel comprises pressurizing the interior of the pressure vessel with carbon dioxide.

36. (Currently Amended) The method of Claim ~~32~~ 31, wherein the carbon dioxide is in a supercritical state.

37. (Original) The method of Claim 36, wherein the carbon dioxide contains one or more of a co-solvent, a surfactant, and a co-surfactant.

38. (Original) The method of Claim 31, wherein the carrier fluid is configured to alter diffusion coefficients of the polymeric material.

39. (Original) The method of Claim 37, wherein the co-solvent is selected from the group consisting of ethanol and methanol.

40. (Original) The method of Claim 31, wherein the intraluminal prosthesis is a stent.

41. (Withdrawn) The method of Claim 31, wherein the polymeric material is erodible.

42. (Original) The method of Claim 31, wherein the polymeric material is non-erodible.

43. (Original) The method of Claim 31, wherein the polymeric material is a coating on a portion of the intraluminal prosthesis.

44. (Withdrawn) The method of Claim 41, wherein the erodible polymeric material is selected from the group consisting of, surgical gut, silk, cotton, liposomes, poly(hydroxybutyrate), polycarbonate, polyacrylate, polyanhydride, polyethylene glycol,

poly(ortho esters), poly(phosphoesters), polyesters, polyamides, polyphosphazenes, poly(*p*-dioxane), poly(amino acid), polyglactin, erodible hydrogels, collagen, chitosan, poly(lactic acid), poly(L-lactic acid), poly(D,L-lactic acid), poly(glycolic acid), poly(D-lactic-co-glycolic acid), poly(L-lactic-co-glycolic acid), poly(D,L-lactic-co-glycolic acid), poly(ε-caprolactone), poly(valerolactone), poly(hydroxy butyrate), poly(hydrovalerate), polydioxanone, poly(propylene fumarate), poly(ethyleneoxide)-poly(butylene tetraphthalate), poly(lactic acid-co-lysine), poly(L-lactic acid) and poly(ε-caprolactone) copolymers.

45. (Previously Presented) The method of Claim 31, further comprising:
immersing the intraluminal prosthesis in a mixture of a carrier fluid and radiopaque material; and

pressurizing the mixture of carrier fluid and radiopaque material for a time such that the carrier fluid and radiopaque material at least partially penetrate the polymeric material.

46 - 71 (Cancelled)

72. (New) The method of Claim 1, wherein the intraluminal prosthesis has first and second unmasked portions, and further comprising:

immersing the intraluminal prosthesis in a mixture of a carrier fluid and first and second pharmacological agents;

pressurizing the mixture of carrier fluid and pharmacological agents for a time sufficient to cause the carrier fluid and the first pharmacological agent to at least partially penetrate the first unmasked portion and to cause the carrier fluid and the second pharmacological agent to at least partially penetrate the second unmasked portion; and

removing the pressure such that the carrier fluid diffuses out of the polymeric material and such that an amount of the first pharmacological agent remains elutably trapped within the first unmasked portion and an amount of the second pharmacological agent remains elutably trapped within the second unmasked portion.